The Congestion Mitigation and Air Quality Improvement Program

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A Summary of Sixth-Year Activities
(FY 1997) October 1996 - September 1997

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Federal Highway Administration
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HENE

March 12, 1999

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Introduction

This report summarizes the sixth-year (FY 1997) of program expenditures associated with the Congestion Mitigation and Air Quality Improvement Program (CMAQ). For additional copies of this and prior CMAQ annual reports prepared by the Federal Highway Administration (FHWA) and the Federal Transit Administration (FTA), for fiscal years 1992 through 1997, please contact the FHWA's Office of Natural Environment at (202) 366-9173.

The summary of the sixth-year (FY 1997) obligations includes information collected from State DOTs in their annual CMAQ reports submitted to FHWA in 1998. The annual CMAQ reports provided data related to project types and categories, project descriptions, and potential air quality benefits in terms of emissions removed from the atmosphere. For additional guidance related to CMAQ annual reporting requirements, please refer to the FHWA/FTA's *Guidance Update on the CMAQ Program*, dated March 7, 1996. For your information, additional CMAQ guidance based on the new provisions under the Transportation Equity Act for the 21st Century (TEA-21) will soon be forthcoming from FHWA and FTA in the very near future.

As indicated above, TEA-21 established many new program changes that will soon be reflected in final guidance to be released by FHWA and FTA in the spring of 1999. Until this final guidance is issued, however, the *Interim Guidance on the CMAQ Program* (issued by DOT on August 14, 1998) is the most recent guidance update prepared by DOT for use by States that reflects changes under TEA-21. The *Interim Guidance* covers informational items on issues related to the reauthorized CMAQ program, new provisions regarding apportionment factors, as well as guidance for newly eligible activities under TEA-21.

Some of the newly eligible programs under TEA-21 include: a) extreme low-temperature cold-start programs; b) magnetic levitation transportation technologies; and c) public-private initiatives (including private sector and/or non-profit entities). Special eligibility for costs related to privately-owned vehicles or fleets using alternative fuels is limited to the incremental cost of an alternative fueled vehicle compared to a conventionally fueled vehicle under the new TEA-21 provisions. In addition, TEA-21 allows up to 100 percent funding of transit vehicle priority control systems in addition to traffic signalization and carpool/vanpool programs.[1]

The following report summarizes FHWA's review and analysis of data based upon data collected from all 50 States including the District of Columbia and Puerto Rico. General findings and conclusions based upon the review of the State-submitted data for FY 1997 are shown below.

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[1]For additional guidance on eligible CMAQ projects, please refer to U.S. DOT's "Interim Guidance on the CMAQ Program", dated August 14, 1998.

FY 1997 CMAQ Annual Report Findings

- The nationwide obligation rate of CMAQ funds dropped several percentage points from previous fiscal years to 84.4 percent (down from the high of 111 percent reported in FY 1996, and 99.5 percent reported in FY 1995). However, this obligation rate is still significantly higher than levels reported in earlier years of the program (e.g., FY 1992 (42 percent) and FY 1993 (62 percent)). This funding drop may be associated with various efforts at the State and local levels to reauthorize ISTEA legislation during FY 1997.

- The amount of CMAQ funds obligated for traffic flow improvements rose to higher levels in FY 1997 than in any previous year. In FY 1997, total CMAQ funds obligated toward traffic flow improvements were shown to account for 42.6 percent of the total amount of funds obligated nationwide (in comparison to 33.3 percent for transit category). Traffic flow improvements have maintained between 28 percent to 37 percent of previous historical annual expenditures over the past 6 years.

- For other CMAQ project categories including: demand management, shared ride, Surface Transportation Program (STP)/CMAQ, pedestrian/bicycle, and "other" programs, obligations rose slightly by 1 percent over levels reported in previous years (24.1 percent in FY 1997 vs. 23.1 percent in FY 1996). However, only one experimental project was funded in FY 1997 (located within the State of Maine) and only two were reported in last year's FY 1996 CMAQ annual report.

  In FY 1997, approximately 768 proposals out of a total of 1178 (65 percent) CMAQ funded proposals submitted had performed some form of quantitative volatile organic compounds (VOC) emissions analysis to demonstrate emission benefits. This is down from the number of VOC emissions analyses (75 percent) shown in previous (e.g., FY 1995 and FY 1996) annual reports.

- The Fiscal Management Information System (FMIS) data used by DOT in tracking Federal-aid obligations by State compare favorably (within 4 percent accuracy) with the total cumulative obligations reported by States in their CMAQ annual reports for FY 1997.

Sixth-Year Results

Obligation Rates

In FY 1997, the States obligated approximately $807.2 million for proposals funded under the CMAQ program. The nationwide apportionments during this same time period were shown to be $955.9 million as recorded by DOT under the FMIS for an overall obligation rate of 84.4 percent nationwide. While this obligation rate is somewhat lower than the high rates reported in FY 1996 and FY 1995 CMAQ annual reports. The FY 1997 obligation rates are still higher than those initial obligation rates reported in the early 1990's at the inception of the program as part of the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA). The funding level drop for FY 1997 may also be associated with efforts underway during this period for reauthorization of ISTEA beyond the 1997 fiscal year.

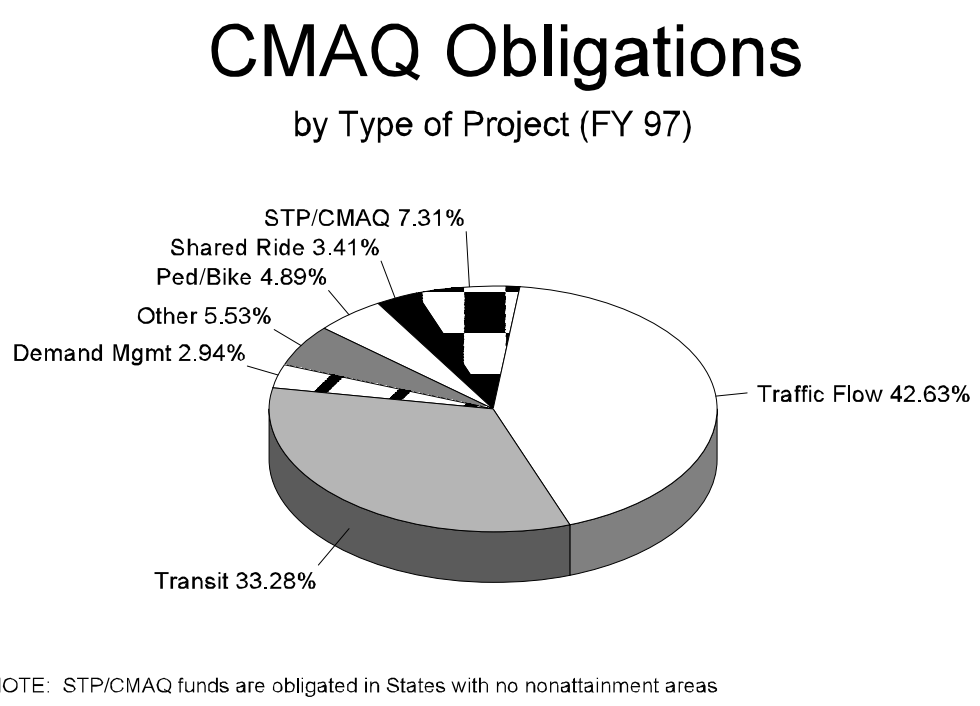
It should be noted that this report covers funding expenditures during the last official year of the ISTEA legislation based on the original CMAQ apportionment formula. The CMAQ annual reports submitted by States next year (in FY 1998) will reflect the new provisions and apportionment formulae codified under the new TEA-21 highway legislation. The TEA-21 highway legislation was passed by Congress and signed into law by the President on June 9, 1998, via Public Law 105-178. Under TEA-21, the levels of CMAQ funding to States have increased nationally by 35 percent over previous ISTEA levels and authorizes $8.1 billion over the next 6 fiscal years (FY 1998 to FY 2003) for CMAQ to assist States toward their efforts to achieve and maintain the national ambient air quality standards (NAAQS).[2]

Additional sources of CMAQ funding (e.g., funds derived from the Minimum Guarantee and transferability provisions under TEA-21) will provide an even higher funding ceiling to provide additional sources of CMAQ-related funding for nonattainment and maintenance areas across the Nation. The CMAQ funding increases under TEA-21 may also assist toward increasing the diversity of project categories and proposals selected by States in the next several years and will also expand the range of potential project sponsorships with many new players. Based on the last year of ISTEA apportionments related to CMAQ funds, the following Figure 1 (next page) shows the distribution of CMAQ funds obligated for each of the seven project categories funded during FY 1997.[3]

[2]The CMAQ eligibility provisions under TEA-21 ensures that any areas designated nonattainment as a result of the new 8-hour ozone and PM2.5 standards promulgated in 1997 will also be eligible for CMAQ funding. However, these new nonattainment areas are not included in the current apportionment formula codified under TEA-21.

[3]This figure does not include the one experimental project funded in FY 1997 by the State of Maine, since its funding level was minimal (<$3,000). In addition, project overruns and underruns associated with previously obligated CMAQ proposals are also not shown since they reflect minimal costs overall nationwide (e.g., $406,000).

FIGURE 1 - CMAQ Obligations for FY 1997



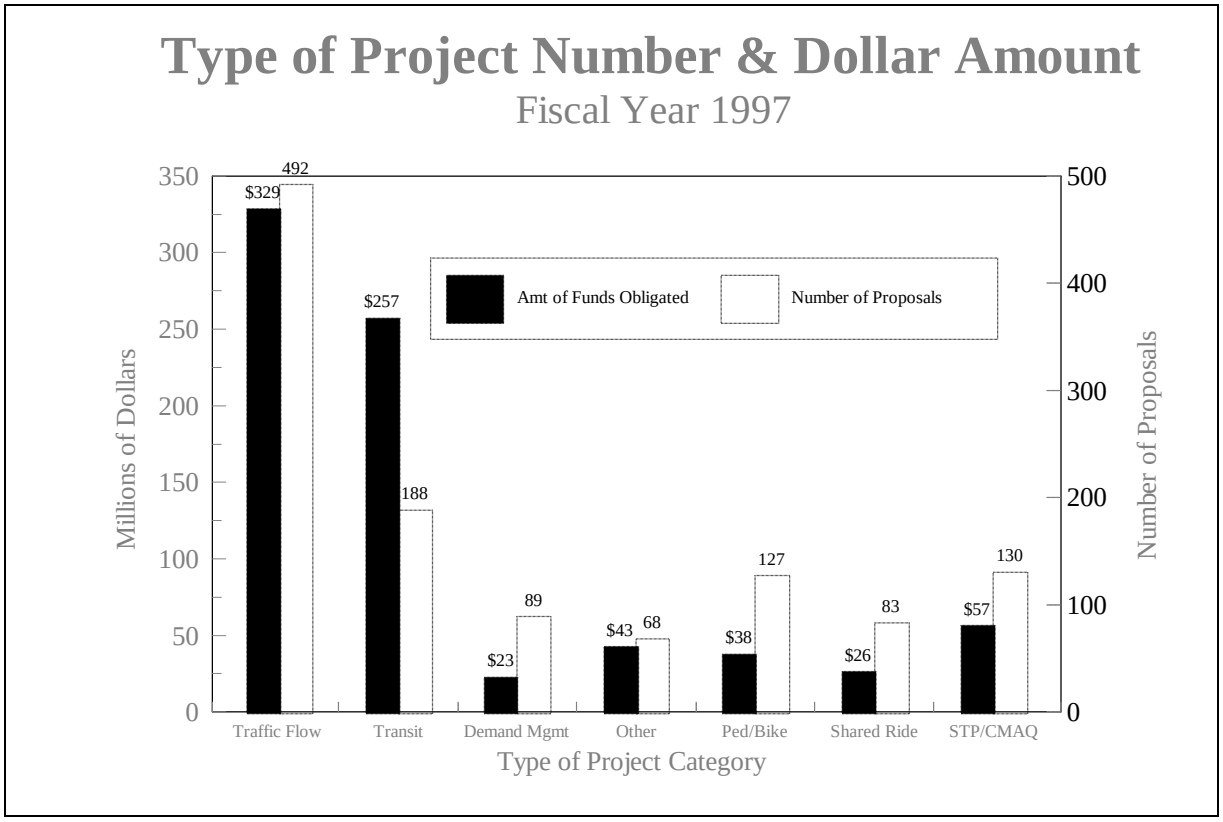
*NOTE: STP/CMAQ funds are obligated in States with no nonattainment areas

Figure 1 indicates that the largest share of CMAQ project fundings was reported for the traffic flow improvement category (42.6 percent) based on data provided by the States in their annual reports for FY 1997. The second largest category of CMAQ funded activities was shown to be transit projects at 33.3 percent of the total CMAQ obligations. The other categories of CMAQ funding (including STP/CMAQ, shared ride, pedestrian/bicycle, other, and demand management proposals) accounted for approximately 24 percent of the total CMAQ obligations for FY 1997. These funding patterns are similar to funding levels reported in FY 1996. However, the total number and obligation levels regarding traffic flow improvement projects was found to be slightly lower in FY 1997 than reported in FY 1996. The percentage share of pedestrian/bicycle projects has increased from FY 1996 levels (from 4.0 percent to 4.89 percent) during FY 1997.

During FY 1996 approximately 562 proposals were funded under the traffic flow improvement category at $348 million, while in FY 1997 the number of traffic flow projects funded was reduced to a total of 492 proposals at $329.4 million. The largest percent growth was found to be in the traffic flow category. However, this trend may be attributable to the fact that the number and obligations of transit improvement proposals have been gradually reduced over the past 2 years. In the transit improvement category, the total number of transit proposals dropped from 39 percent funding level obligations in FY 1996 to only 33.3 percent funding level obligations in FY 1997.

Transit improvements have historically accounted for nearly 45 percent of previous years nationwide funding level obligations for CMAQ (based on data reported by States between FY 1992 to FY 1996). Figure 2 below identifies the total amounts of funds obligated by CMAQ project category, in terms of both the number of proposals and amount of funding obligated for each of the seven category types for FY 1997. As shown below, the categories of traffic flow and transit improvements categories accounted for nearly 76 percent of the total CMAQ program expenditures reported for FY 1997.

FIGURE 2 - Type of Proposals Funded by Category in FY 1997



The amount of funds obligated in FY 1997 by category type indicates a slight increase in the number of pedestrian/bicycle projects, demand management, STP/CMAQ and "other" types of project categories funded in comparison to levels reported in FY 1996. However, the total number of shared ride projects dropped by 19 percent between FY 1997 and FY 1996 (e.g., from 102 projects in FY 1996 compared to a total number of 83 projects funded during FY 1997).

Table 1 provides funding data from the top 13 States receiving the largest CMAQ apportionments between October 1, 1996 and September 30, 1997 (FY 1997). The four States with the highest obligation rates in FY 1997 include California (98 percent), New York (137 percent), Florida (104 percent), and Connecticut (129 percent).

Table 1 - Top 13 States Receiving the Largest CMAQ Apportionments During FY 1997 (October 1996- September 1997)*

State	Amount Apportioned	Amount Obligated**	FY 1997 Obligation Rate
California	$142	$138	98 percent
New York* **	**$101**	**$138**	**137 percent**
Texas	$95	$68	72 percent
Pennsylvania	$58	$40	69 percent
New Jersey	$55	$17	30 percent
Illinois	$47	$39	83 percent
Ohio	$42	$19	44 percent
Massachusetts	$39	$19	48 percent
Maryland	$30	$9	30 percent
Florida* **	**$29**	**$30**	**104 percent**
Michigan	$28	$19	70 percent
Connecticut* **	**$23**	**$29**	**129 percent**
Virginia	$20	$6	30 percent

NOTES:
* in millions.
** amounts obligated shown from State annual reports submitted for FY 1997.
*** **Bold type** denotes greater than 100 percent obligation rates for States.

Program Activities

During FY 1997, FHWA and FTA approved funding for 1,178 CMAQ proposals, slightly less than the 1,257 proposals funded during FY 1996. In comparison with previous fiscal year annual reports, this level has exceeded all years except for FY 1996 when a high of 1,257 proposals were funded under the CMAQ program. Table 2 (next page) summarizes obligation rates for each State based on data provided by DOT's FMIS. The total obligation rates (the total amount authorized versus funded) for the Nation is shown at 81 percent for FY 1997, however this percentage would be much higher if unpaid obligations were included in this calculation. A total of 5,430 CMAQ proposals have been reported by States as being funded during the 6-year life of ISTEA.

TABLE 2 - Status of Obligation Rates by State Over Six-Year Period of ISTEA (FY 1992 - FY 1997)**

Dollars Shown Rounded to Nearest Million

State	Total Available	Total Obligated	Unpaid Obligations	Obligation Rate
Alabama	27	16	10	60 percent
Alaska	27	18	9	64 percent
Arizona	74	74	27	100 percent
Arkansas*	24	20	9	84 percent
California	815	732	349	90 percent
Colorado	27	25	7	92 percent
Connecticut	129	116	48	90 percent
Delaware	27	19	13	69 percent
District of Columbia	27	20	12	73 percent
Florida	164	130	42	79 percent
Georgia	85	69	15	81 percent
Hawaii*	27	18	7	65 percent
Idaho	27	16	5	57 percent
Illinois	269	236	126	88 percent
Indiana	62	31	22	50 percent
Iowa*	27	24	2	87 percent
Kansas*	27	25	4	92 percent
Kentucky	40	37	15	93 percent
Louisiana	27	17	8	63 percent
Maine	27	14	8	52 percent
Maryland	171	122	40	71 percent
Massachusetts	226	183	39	81 percent
Minnesota	27	17	6	60 percent
Mississippi*	27	23	6	85 percent
Missouri	55	38	24	70 percent
Montana	27	16	10	57 percent
Nebraska*	27	27	1	100 percent
Nevada	27	21	3	76 percent
New Hampshire	27	14	6	50 percent

TABLE 2 - Status of Obligation Rates by State Over Six-Year Period of ISTEA (FY 1992 - FY 1997) CONT'D** *Dollars Shown Rounded to Nearest Million*				
State	**Total Available**	**Total Obligated**	**Unpaid Obligations**	**Obligation Rate**
New Jersey	317	305	101	96 percent
New Mexico	27	25	14	90 percent
New York	579	536	338	93 percent
North Carolina	61	57	29	94 percent
North Dakota*	27	20	2	74 percent
Ohio	238	150	46	63 percent
Oklahoma*	27	26	12	94 percent
Oregon	32	28	16	87 percent
Pennsylvania	332	287	111	87 percent
Puerto Rico*	27	25	8	93 percent
Rhode Island	32	18	10	55 percent
South Carolina	27	27	8	100 percent
South Dakota*	27	27	2	100 percent
Tennessee	59	36	24	62 percent
Texas	546	333	144	61 percent
Utah	27	22	7	79 percent
Vermont*	27	16	7	62 percent
Virginia	117	95	52	81 percent
Washington	88	87	43	99 percent
West Virginia	27	27	7	97 percent
Wisconsin	69	38	18	56 percent
Wyoming*	27	21	0	77 percent
Total (Nationwide) =	**5,484**	**4,452**	**1,912**	**81 percent**

NOTES:
* Minimum Apportionment States.
** Data Source: DOT's FMIS.

Appendix A of this report provides a summary of each CMAQ proposal funded by each State with CMAQ funding amounts, estimated emissions benefits, as well as individual project descriptions. All 50 States including the District of Columbia and Puerto Rico have been included in the Appendix A table including minimum apportionment States.[4] As in previous years, the CMAQ annual expenditures for FY 1997 have been separated into seven different project categories, including: a) transit; b) traffic flow improvements; c) shared ride; d) demand management; e) pedestrian & bicycle; and f) other TCMs. Only one experimental pilot project

[4]Minimum apportionment States receive at least 1/2 of 1 percent minimum guaranteed to each State under the CMAQ program. Many of these States do not have any nonattainment or maintenance areas based on the NAAQS for ozone and carbon monoxide (CO).

was recorded for the State of Maine (a small traffic calming project). Based on information collected in the last two CMAQ annual reports, there is some indication that very few efforts have been made by State and local agencies to fund "experimental" types of pilot projects.

Analysis of Air Quality Emission Benefits

Overall Analysis

Based on the State annual reports submitted to FHWA, the total number of proposals with accompanying emissions analysis was shown to be 768 for VOC pollutants reduction, 458 for CO pollutants, and 640 for nitrogen oxides (NOx) pollutants. The range of emissions reduction potential for each of the major transportation-related emission types is provided on the following pages as shown in Figures 3 through Figure 5. Particulate matter emissions analysis was only performed for only a limited number of proposals, as consistently recorded in previous year annual CMAQ reports. For example, in FY 1997, only 104 CMAQ proposals attempted to estimate particulate matter reductions, and this level of effort is similar to the number reported in FY 1996 (135).

FIGURE 3 - Expected VOC Emissions Reductions (FY 1997)

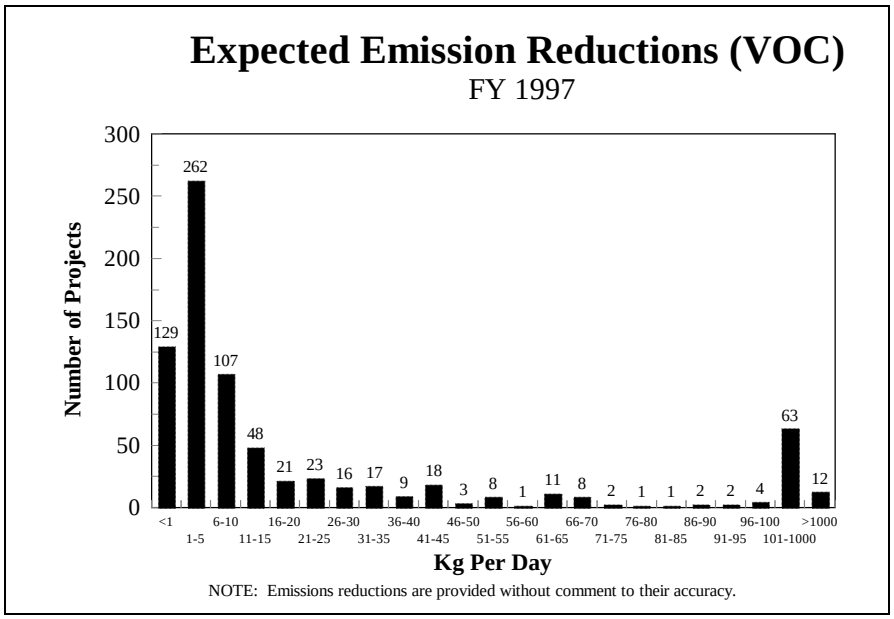


FIGURE 4 - Expected CO Emission Reductions (FY 1997)

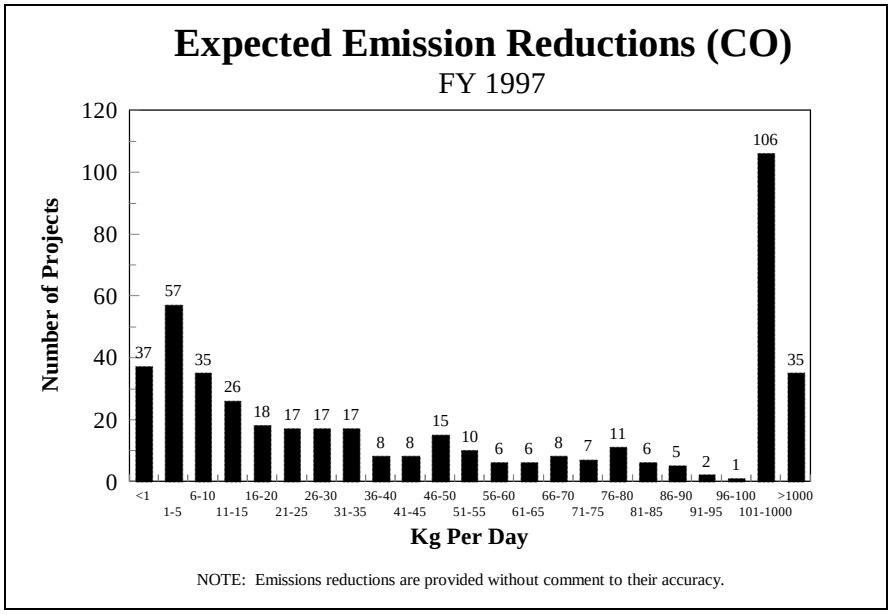
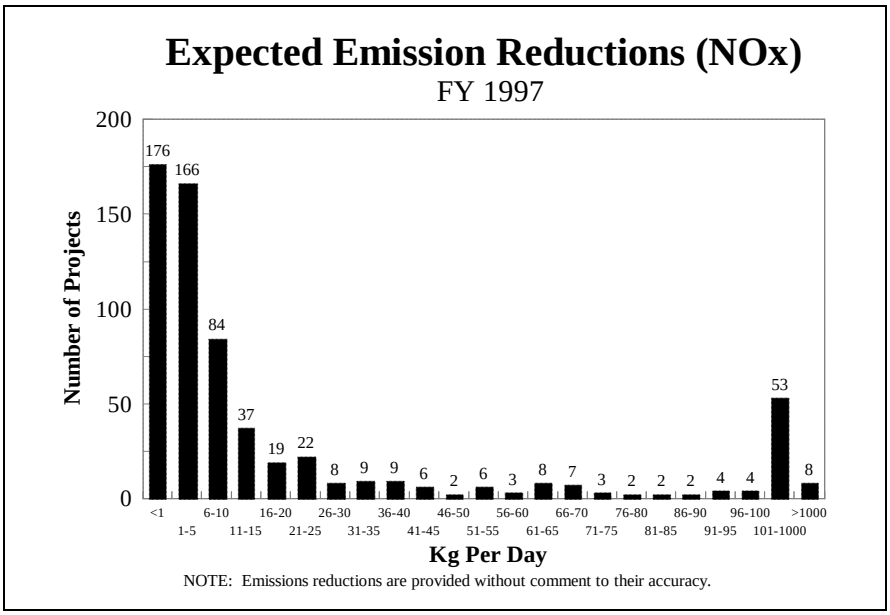


FIGURE 5 - Expected NOx Emission Reductions (FY 1997)



As shown in Figures 3 through 5, the majority of proposals submitted under the CMAQ program have less than 15 kg/day emission reduction potential based on estimates provided by States in their annual CMAQ reports. More than half of VOC emission estimates provided by States (391 of 768 reporting VOC emissions reductions), yield less than 5 kg/day, and 90 percent yield

less than 100 kg/day. However (as shown in the Figure 4) a very large number of CMAQ-funded proposals submitted with emission estimates for CO (31 percent) do seem to target emissions reductions in the 100 to 1000 kg/day emissions range.

A summary table (See Table 3, below) provides an overview of the four major transportation-related pollutants in terms of the number of analyses, as well as minimum, maximum, and median ranges of emission reduction estimates provided by States in their FY 1997 annual reports. As indicated in Table 3, a majority of proposals submitted for CMAQ funding have been reviewed for emissions reductions for smog-related pollutants (e.g., VOC and NOx emissions). The range of minimum, maximum, and median emissions estimates are consistent with those estimates reported in previous CMAQ annual reports.

Table 3 - Estimated CMAQ Air Quality Emission Benefits for Transportation Pollutants (in kg per day)

Emission Type	Number[1]	Minimum	Median[2]	Maximum
VOC	768	-12	5	40,814
CO	458	-70	37	22,318
NOx	640	-336	4	37,113
PM-10	104	0	0	4,590
TOTAL=	1970			

NOTES:

[1]The number of projects submitted with VOC, CO, and/or NOx emissions analysis.

[2]The median, rather than the mean, is a better representation of average effectiveness because the mean is unduly influenced by relatively few projects with large emissions reductions. The median is the point above or below which 50 percent of all observations lie when ranked highest to lowest. Emissions reductions are provided without comment as to their accuracy.

Table 4 (next page) provides VOC emission information gathered from State CMAQ annual reports that suggest that the greatest median air quality emissions reductions occur in the demand management category. Other categories including traffic flow, transit, and shared ride categories have nearly equal median values associated with VOC emissions. Out of the 768 CMAQ proposals submitted with VOC emission reductions estimates, the traffic flow improvement category has the largest single share of projects (380) with a median value of 6 kg/day VOC emissions removed from the atmosphere. The largest amount of VOC emissions reductions are associated with the "Other TCMs" category (e.g., enhanced inspection and maintenance (I/M) programs, etc.) as noted in previous CMAQ annual reports.

Table 4 - Air Quality Analysis by Project Type (VOC, kg/day)				
Type of Project	**Number[1]**	**Minimum**	**Median[2]**	**Maximum**
Transit	145	0	5	3,312
Traffic Flow	380	-12	6	5,824
Shared Ride	67	0	5	972
Other TCMs	30	0	4	40,814
Ped/Bike	96	0	1	54
Demand Mgmt	50	0	26	495
TOTAL=	768			

NOTES:

[1]The number of projects submitted with VOC, CO, and/or NOx emissions analysis.

[2]The median, rather than the mean, is a better representation of average effectiveness because the mean is unduly influenced by relatively few projects with large emissions reductions. The median is the point above or below which 50 percent of all observations lie when ranked highest to lowest. Emissions reductions are provided without comment as to their accuracy.

Table 5 (below) shows the emissions benefits of 458 CMAQ-funded proposals in terms of CO removed from the atmosphere in terms of kg/day. The category of demand management is shown to have the highest median value for CO (215 kg/day) in comparison to median estimates of CO reductions for transit and traffic flow improvements (in the 34 kg/day and 50 kg/day range, respectively).

Table 5 - Air Quality Analysis by Project Type (CO, kg/day)				
Type of Project	**Number[1]**	**Minimum**	**Median[2]**	**Maximum**
Transit	85	0	34	5,730
Traffic Flow	221	-1	50	22,318
Shared Ride	41	-2	20	7,599
Other TCMs	21	0	12	6,046
Ped/Bike	59	-70	7	459
Demand Mgmt	31	0	215	3,113
TOTAL=	458			

NOTES:

[1]The number of projects submitted with VOC, CO, and/or NOx emissions analysis.

[2]The median, rather than the mean, is a better representation of average effectiveness because the mean is unduly influenced by relatively few projects with large emissions reductions. The median is the point above or below which 50 percent of all observations lie when ranked highest to lowest. Emissions reductions are provided without comment as to their accuracy.

Table 6 (below) shows the minimum, median, and maximum emissions benefits for NOx based on data provided by States in their FY 1997 annual reports. Out of 640 CMAQ proposals submitted with NOx emissions reductions estimates, the category of projects with the highest number of NOx emissions reductions estimates is shown to be traffic flow improvements. However, the highest median value of NOx emission reductions potential (46 kg/day) is shown to be in the demand management category. In fact, the demand management category accounted for the highest median values for all three pollutant types shown in Tables 4-6 although this category ranks second to last in terms of actual number.

Table 6 - Air Quality Analysis by Project Type (NOx, kg/day)

Type of Project	Number[1]	Minimum	Median[2]	Maximum
Transit	121	-27	7	2,079
Traffic Flow	313	-336	2	4,928
Shared Ride	57	0	7	2,149
Other TCMs	20	0	2	37,113
Ped/Bike	84	-8	1	96
Demand Mgmt	44	0	46	813
TOTAL=	639[3]			

NOTES:

[1] The number of projects submitted with VOC, CO, and/or NOx emissions analysis.

[2] The median, rather than the mean, is a better representation of average effectiveness because the mean is unduly influenced by relatively few projects with large emissions reductions. The median is the point above or below which 50 percent of all observations lie when ranked highest to lowest. Emissions reductions are provided without comment to their accuracy.

[3] In addition, one experimental project was shown to have a 6 kg/day NOx reduction as well.

Table 7 (next page) summarizes the top CMAQ-funded proposals with at least 500 kg/day VOC emission reduction potential based on data provided by States in their annual reports. As shown in this table, 8 of the 16 CMAQ proposals (50 percent) with at least 500 kg/day emissions potential include traffic flow improvement projects funded during FY 1997. As was the case in previous CMAQ annual reports, the project category with the highest potential to reduce VOC emissions was the "Other TCMs" category. Based on the data from FY 1997 reports, the CMAQ proposal with the highest potential to reduce VOC emissions was submitted by the State of New Jersey for their enhanced I/M program (estimated 40,814 kg/day VOC emission reduction potential). The total number of CMAQ-funded proposals with at least 500 kg/day (or higher) VOC emission reductions was found to be 16 for FY 1997, slightly less than the number of projects reported in FY 1996 (22) and in previous years.

Table 7 - Projects With At Least 500 kg/day VOC Emission Reductions (Emission reductions are provided without comment on their accuracy.)			
Project Description	**Project Type**	**State**	**Emissions Benefits (kg/day)**
Enhanced I/M Program	Other	New Jersey	40,814
Public Outreach Campaign for I/M Programs in Harris County	Other	Texas	22,675
Waukesha County Technical College, IM-240 Training Center	Other	Wisconsin	18,140
Signal Interconnection Project at Walnut Avenue Corridor	Traffic Flow	California	5,824
Purchase of five 16-passenger buses in the City of Porterville	Transit	California	3,312
Intersection Improvement on Morton at Indiana and Second Street	Traffic Flow	California	2,832
Purchase Traffic Signal Management System (Harris County)	Traffic Flow	Texas	2,520
I/M Enhancement Project (Louisville, KY)	Other	Kentucky	2,187
Enhance Traffic Center for Congestion Management System	Traffic Flow	Washington	1,691
Traffic Signalization Improvements at Walnut Ave and Woodland Street	Traffic Flow	California	1,600
Traffic Signal Improvements at Akers Street and Hurley Ave	Traffic Flow	California	1,200
Improved Signal Coordination on Henderson/Plano and Westwood Avenue	Traffic Flow	California	990
Metropool Rideshare Programs	Shared Ride	New York	972
Green Line Marketing Program	Transit	Illinois	683
Purchase Portable Changeable Message Signs (CMS) in Jefferson, Hardin, and Orange Counties	Traffic Flow	Texas	633
Multi-Transit Related Projects for METRO	Transit	Washington	575

Areas Needing Improvement

Based on review of the State annual reports submitted for FY 1997, the following areas will need additional improvement as the CMAQ program evolves into its new funding cycle in FY 1998 under the TEA-21. As found in previous reviews of State annual reports, additional efforts to provide more than minimal project descriptions would assist DOT in the future. In some cases, project descriptions were found to be inadequate, and thus required follow up phone conversations to State and local officials by DOT to better identify the CMAQ projects and their potential air quality benefits.

Information gathered as part of Congressional inquiries, briefings to the Office of the Vice President, and other major stakeholders are routinely performed by DOT and the basis for information is often derived from annual CMAQ reports submitted by States each fiscal year. For example, a new $1 million study commissioned under TEA-21 will be performed by the National Academy of Sciences to be completed by January 1, 2001. This study and others will require data and other information collected on potential benefits and costs of the CMAQ program. Without a basis for this information, a full assessment of the potential benefits and costs of the CMAQ program may be difficult if not impossible to perform by DOT or other interested stakeholders.

Conclusions and Recommendations

This report completes 6 years of observed trends under the CMAQ program created under the ISTEA. No longer considered an experimental Federal-aid highway program, the CMAQ program has been enhanced and expanded under the TEA-21 to include broader categories of eligible projects. Based on information collected by DOT as part of FY 1997 CMAQ annual reports, the following observations are offered to States and local agencies for purposes of developing future CMAQ annual reports:

- Provide better CMAQ project information in terms of clear and complete project descriptions concerning the type of project category (including various project phases, scope of work, location, etc.);

- Provide specific pollutant criteria emissions reductions in terms of kg/day removed from the atmosphere, by showing quantitative emissions estimates whenever possible;

- Ensure that accurate financial estimates (consistent with DOT's FMIS figures) are provided that include only the Federal-aid CMAQ portion of funds for each proposal; and

- Submit each annual report to the FHWA by February 1 of each calendar year to show only those CMAQ proposals funded in the previous fiscal year.